



User manual



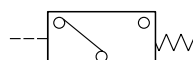
Selection table



Features

- Hysteresis adjustable.
- High accuracy and Resolution.
- Low cost.
- Pressure unit selectable: kPa, MPa, kgf/cm², bar, psi, inHg, mmHg.

Symbol



Specification

Model		MP41C (Compound)	MP41P (Positive)
Rated pressure range		— 100.0 ~ 100.0 kPa	0.0 ~ 1.0 MPa
Setting pressure range		— 101.0 ~ 101.0 kPa	— 0.1 ~ 1.0 MPa
Withstand pressure		300 kPa	1.5 MPa
Fluid		Filtered air, Non-corrosive / Non-flammable gas	
Set pressure resolution	kPa / MPa	0.1 / —	— / 0.001
	kgf/cm ² / bar	0.001	0.01
	psi	0.01	0.1
	inHg / mmHg	0.1 / 1	—
Power supply voltage		12 to 24V DC $\pm 10\%$, Ripple (P-P) 10% or less	
Current consumption		$\leq 40\text{mA}$ (With no load)	
Switch output	Output type	2 NPN or 2 PNP open collector	
	Max. load current	125mA	
	Max. supply voltage	30V DC (at NPN output), 24V DC (at PNP output)	
	Residual voltage	$\leq 1.5\text{V}$	
Response time		Chattering-proof function: 50ms, 250ms, 500ms, 1000ms, 2000ms, 3000ms selections	
Output short circuit protection		Yes	
Display	LCD display	3½ digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate: 5 times/sec.)	
	Switch on indicator	Orange indicator 1 : OUT1 & Orange indicator 2 : OUT2	
	Updates time	Adjustable	
	Indicator accuracy	$\pm 2\%$ F.S. ± 1 digit (ambient temperature: $25 \pm 3^\circ\text{C}$)	
Repeatability (Switch output)		$\pm 0.2\%$ F.S. ± 1 digit	
Environment	Enclosure	IP40	
	Ambient temp. range	Operation: $0 \sim 50^\circ\text{C}$, storage : $-10 \sim 60^\circ\text{C}$ (No condensation or freezing)	
	Ambient humidity range	35 ~ 85% RH (No condensation)	
	Withstand voltage	1000V AC in 1-min. (between case and lead wire)	
	Insulation resistance	50M Ω min. (at 500V DC, between case and lead wire)	
	Vibration	Total amplitude 1.5mm or 10G, 10Hz-150Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z	
	Shock	100m/s ² (10G), 3 times each in direction of X,Y and Z	
Temperature characteristic		$\pm 2\%$ F.S. of detected pressure (25°C) at temp. Range of $0 \sim 50^\circ\text{C}$	
Lead wire		$\phi 4$ Oil-resistance cable (PVC) - 26 AWG (0.15mm ²) - 4 cores	
Weight		Approx. 65 g (with 2 meter lead wire), Approx. 30g (with male connector)	

MP41 Order example

HIGH PRECISION DIGITAL PRESSURE SWITCH



Output circuit wiring graph

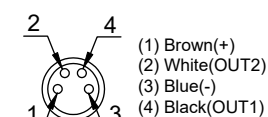
Model	MP41□-022	MP41□-042
Connect diagram		
Output method	2 NPN output	2 PNP output

Order example

MP41P – 022 – QD – W

MODEL	OUTPUT METHOD 022: 2 NPN output 042: 2 PNP output	HOLDER W: White (for MA**302 / 401-W / 403 / 501 series) B: Black (for MA**401 series)
PRESSURE RANGE C: Compound (–101.0~101.0 kPa) P: Positive (–0.100~1.000 MPa)	CABLE LENGTH / CONNECTOR Blank: With 2 meter cable QD*: With M8, 4 Pin male connector * MOQ required. Please contact us.	

QD Pinout



Mounting accessories (Option)

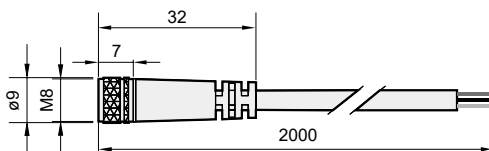
MP – D1

MODEL	OPTION PARTS D1: M8, 4 Pin female connector (M84R-W0085-2M)
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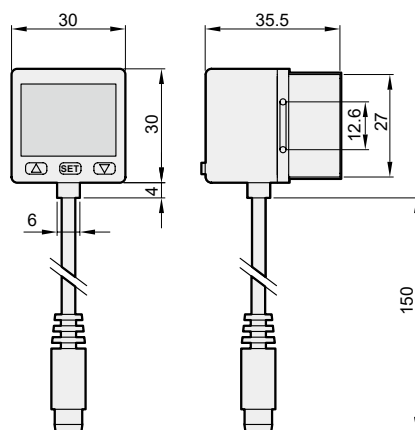


MP-D1

M8, 4 Pin female connector



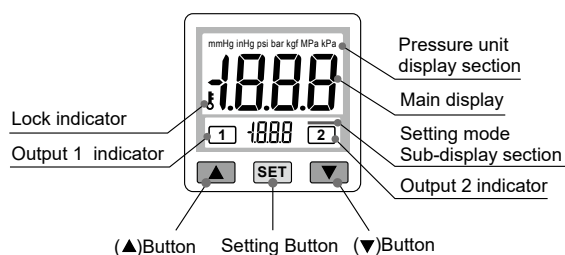
Dimensions



Applicable model

Series	302 / 403 / 501	401
F.R.L.Unit	MACP302 / 403 / 501	MACP401
F.R.L.Unit	MACT302 / 403 / 501	MACT401
F.R.Unit	MAFR302 / 403 / 501	MAFR401
R. Unit	MAR302 / 403 / 501	MAR401
F.R.Unit	—	MAFRF401
F.R.Unit	—	MATFR401

Panel instructions



MP41 With MA**302

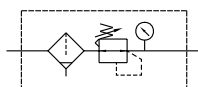
HIGH PRECISION DIGITAL PRESSURE SWITCH



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Symbol

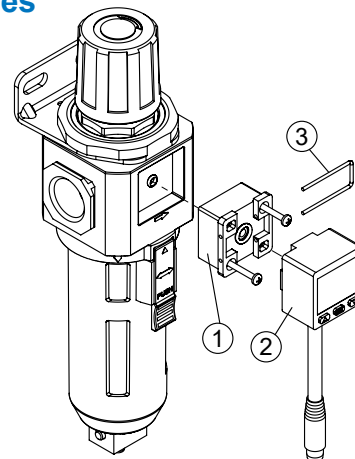


Mounting procedures

1. Fix the holder.
2. Assembly the digital pressure switch.
3. Button the n-ring.

Order example of sensor holder set

Model	Description
A-MP41-W	White. Include part ①.



Order example

MAFR302 — 8A — □□□ — E1 — □ — G

MODEL

MACP302
MACT302
MAFR302
MAR302

PORT SIZE

8A: 1/4
10A: 3/8
15A: 1/2

PRESSURE SWITCH

Blank: without
E1: MP41P-022
E2: MP41P-022-QD (*2)
E5: MP41P-042
E6: MP41P-042-QD (*2)

(*1)

FILTER ELEMENT

Blank: 5μm
40u: 40μm

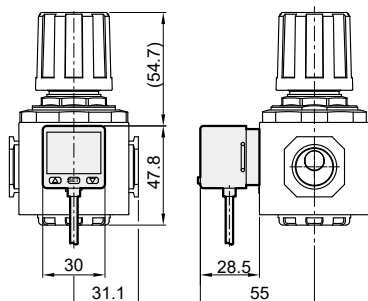
PORT THREAD

Blank: Rc thread
G: G thread
NPT: NPT thread

Bowl	Drain valve (*1)	Flow direction
Blank: PC bowl M: Metal bowl N: Nylon bowl	Blank: Semi-auto D: Auto (FMRF300)	Blank: Left to right R: Right to left

*1. Not applicable to MAR302 series.
*2. MOQ required. Please contact us.

MAR302

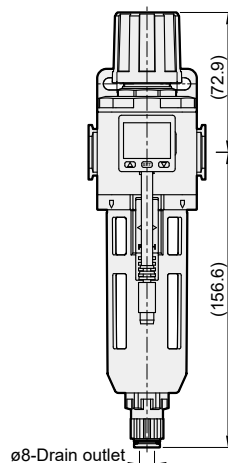


MAFR302

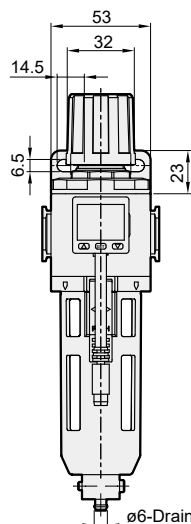
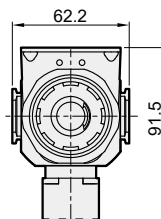
MAFR302-D

Auto drain valve

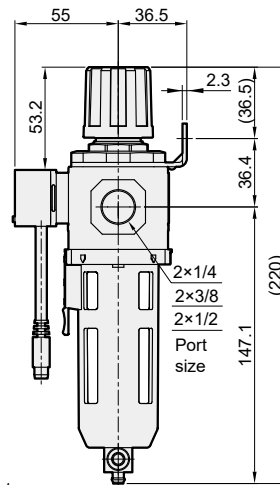
Operating pressure range
0.15~1 MPa



ø8-Drain outlet



ø6-Drain outlet



MP41 With MA**401

HIGH PRECISION DIGITAL PRESSURE SWITCH



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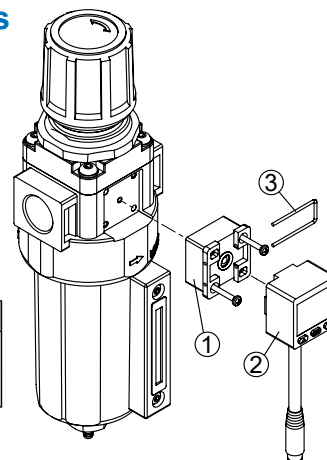


Mounting procedures

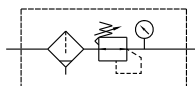
1. Fix the holder.
2. Assembly the digital pressure switch.
3. Button the n-ring.

Order example of sensor holder set

Model	Description
A-MP41-W	White Include part ①.
A-MP41-B	Black



Symbol



Order example

MAFR401 — 8A — □ — □□□ — E1 — □ — □ — G

MODEL
MACP401
MACT401
MAFR401
MAR401

PORT SIZE
8A: 1/4
10A: 3/8
15A: 1/2

EXTERIOR COLOR
Blank: Black & Silver
W: Gray & white

PRESSURE SWITCH
Blank: Without
E1: MP41P-022
E2: MP41P-022-QD (*2)
E5: MP41P-042
E6: MP41P-042-QD (*2)

(*1) FILTER ELEMENT
Blank: 40μm
5u: 5μm

BRACKET
Blank: Without
B2: Screw fixed
(MAFR, MAR only)

PORT THREAD
Blank: Rc thread
G: G thread
NPT: NPT thread

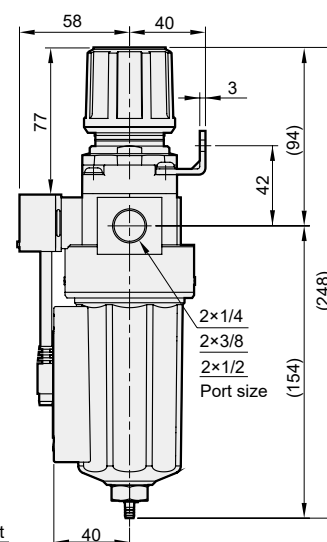
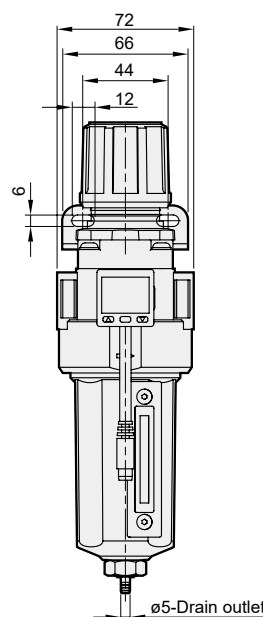
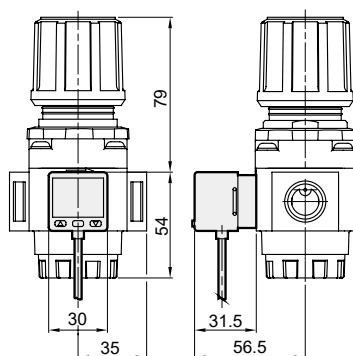
Bowl	Drain valve (*1)	Flow direction
Blank: Metal bowl	Blank: Semi-auto D: Auto (FMRF300)	Blank: Left to right R: Right to left

*1. Not applicable to MAR401 series.

*2. MOQ required. Please contact us.

MAFR401

MAR401



MP41 With MA**403

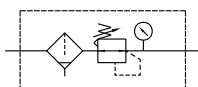
HIGH PRECISION DIGITAL PRESSURE SWITCH



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Symbol

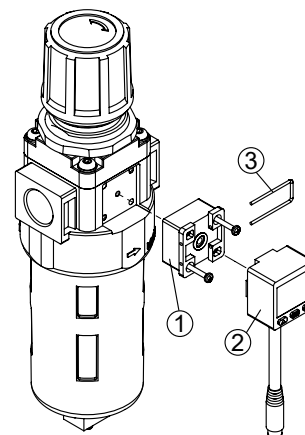


Mounting procedures

1. Fix the holder.
2. Assembly the digital pressure switch.
3. Button the n-ring.

Order example of sensor holder set

Model	Description
A-MP41-W	White. Include part ①.



Order example

MAFR403 — 8A — □□□ — E1 — □ — □ — G

MODEL
MACP403
MACT403
MAFR403
MAR403

PORT SIZE
8A: 1/4
10A: 3/8
15A: 1/2

PRESSURE SWITCH
Blank: Without
E1: MP41P-022
E2: MP41P-022-QD (*2)
E5: MP41P-042
E6: MP41P-042-QD (*2)

FILTER ELEMENT
Blank: 40μm
5u: 5μm

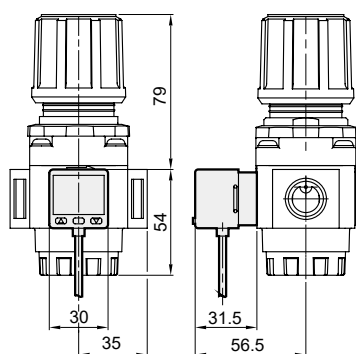
BRACKET
Blank: Without
B2: Screw fixed
(MAFR, MAR only)

PORT THREAD
Blank: Rc thread
G: G thread
NPT: NPT thread

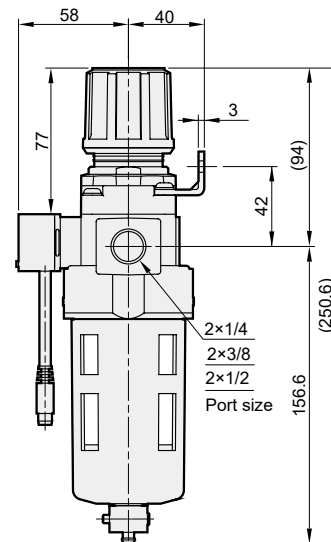
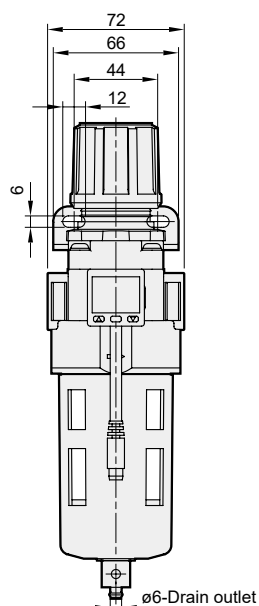
Bowl	Drain valve (*1)	Flow direction
Blank: PC bowl N: Nylon bowl	Blank: Semi-auto D: Auto (FMRF300)	Blank: Left to right R: Right to left

*1. Not applicable to MAR403 series.
*2. MOQ required. Please contact us.

MAR403



MAFR403



MP41 With MA**501

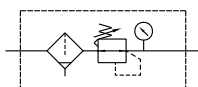
HIGH PRECISION DIGITAL **PRESSURE SWITCH**



mindman



Symbol

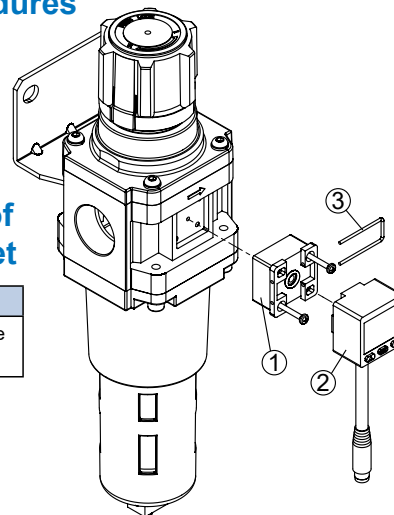


Mounting procedures

1. Fix the holder.
2. Assembly the digital pressure switch.
3. Button the n-ring.

Order example of sensor holder set

Model	Description
A-MP41-W	White. Include part ①.



Order example

MAFR501 — 8A — □□□ — E1 — G

MODEL
MACP501
MACT501
MAFR501
MAR501

PORT SIZE
20A: 3/4
25A: 1

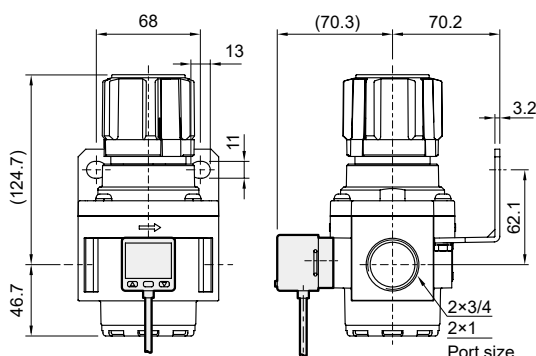
PRESSURE SWITCH
Blank: Without
E1: MP41P-022
E2: MP41P-022-QD (*2)
E5: MP41P-042
E6: MP41P-042-QD (*2)

PORT THREAD
Blank: Rc thread
G: G thread
NPT: NPT thread

Bowl	Drain valve (*1)	Flow direction
Blank: PC bowl M: Metal bowl N: Nylon bowl	Blank: Semi-auto D: Auto (FMRF300)	Blank: Left to right R: Right to left

*1. Not applicable to **MAR501** series.
*2. MOQ required. Please contact us.

MAR501



MAFR501

